TPC events Reconstruction

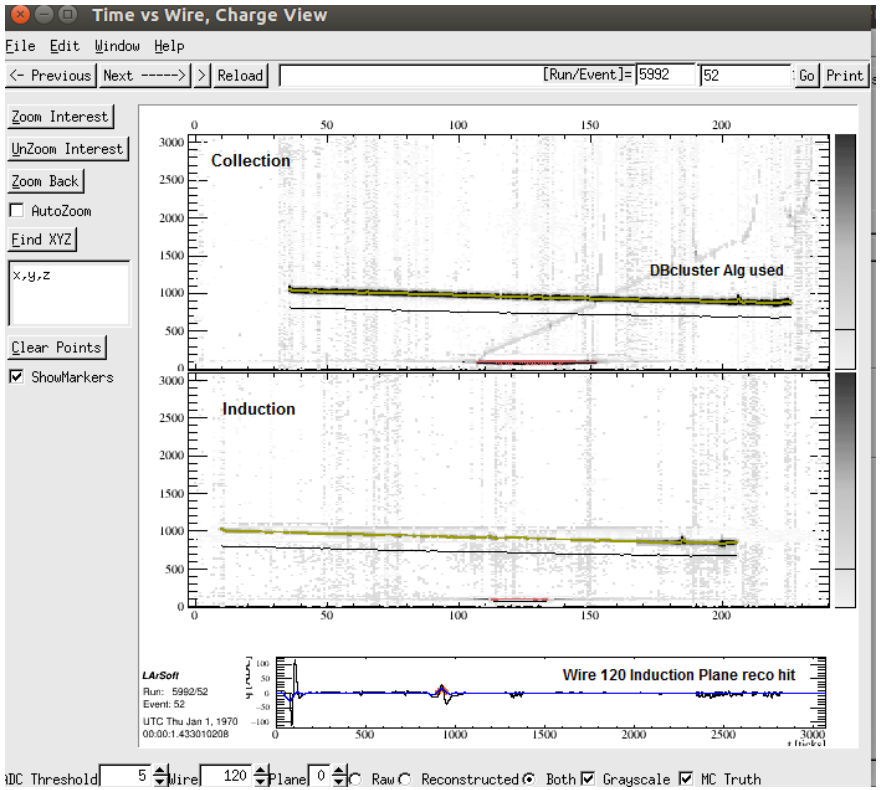
Porting LArSoft modules in LAriATSoft (loop over triggers and trigger-objects associations)

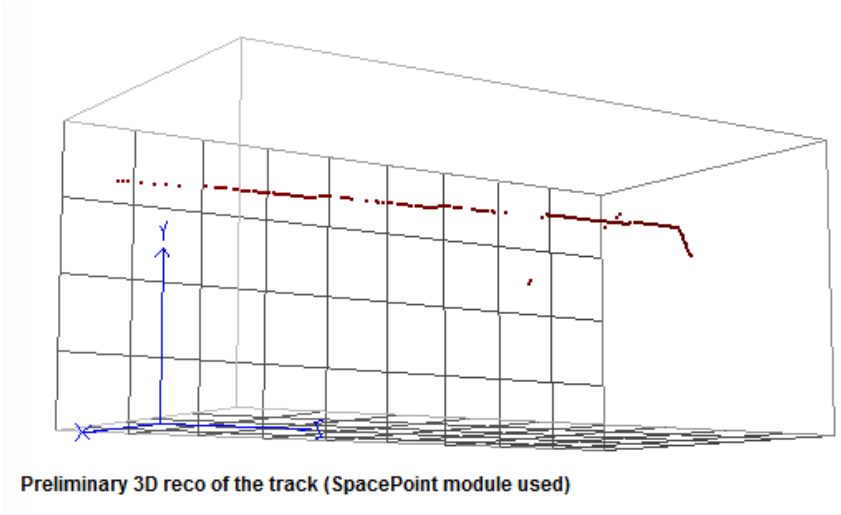
***Preliminary* TPC event Reco chain**:

- Raw data to LArIATSoft readable data: FragmentToDigit $\surd$
- TPC wires signals - noise deconvolution: CalWireT1034 $\surd$ (Jonathan) (deconvolution on Induction Plane needs to be improved)
- TPC wires signals - hit finding: GaussHitFinder $\surd$ (Jonathan)
- Hits clustering: DBCluster $\surd$ (Jonathan)
- Clusters managing: HoughLineFinder $\surd$ (Flor)
- Simple Tracking: SpacePoints $\surd$ (Irene)

Preliminary Reco chain test

Run 5992 sp.52 (only 1 track in the spill): crossing particle (muon?)





Preliminary 3D reco of the track (SpacePoint module used)

Next steps for TPC events Reco

- reco_lariat.fcl (hitfinding and clustering): test with other events
- recotrack_lariat.fcl (hitfinding, clustering and 3d track with SpacePoint module): need to be tuned for better track reco
- Other hitfinder, cluster and track modules need to be ported. Rob: Porting ClusterCrawler module (Hit finder and cluster finder) and Cosmic Tracker (Tracks)
- Triggers and data-object saving: a question?